

REMARKS

The Office Action mailed on August 8, 2006 (the “Office Action”) rejected claims 21-42 under 35 U.S.C. § 103(a) as obvious over the combination of U.S. Patent No. 3,828,630 to Argereu, U.S. Patent No. 3,171,699 to Maxey, and U.S. Patent No. 3,333,300 to Cohan. Applicants respectfully traverse.

Claim 21 recites, among other things, “placing a core element within a tubular mold section, where the core element is slightly larger in cross-section than the workpiece, and the mold section has an inner dimension slightly smaller than the inner dimension of the spindle;” Argereu is silent as to this “placing ...” step. (Office Action, p. 3.) The Cohan reference is directed “to a mold structure which provides a mold for making a roller, for example, on the rolling surface of which there is no gate vestige or mold part line,” (Cohan, col. 1, lines 12-14), but it makes no mention of core element dimensions in relation to any workpiece, nor to a “mold section [that] has an inner dimension slightly smaller than the inner dimension of [any] spindle” whatsoever. This is entirely consistent with the focus of Cohan on the manufacture of rollers, which are different in significant respects from spindle liners. One important difference is that rollers do not have inner diameters related to workpieces. Cohan, therefore, fails to show or suggest the “placing ...” step of claim 21.

The Maxey ’699 patent describes an “insert [that] is interposed between an outer supporting member ... and an inner shaft or pin B which turns relative to the outer supporting member.” (Maxey, col. 2, lines 26-29.) The present claim 21 characterizes the core element as “slightly larger in cross-section than the workpiece,” but the Maxey reference does not describe core elements *in a mold*. Furthermore, where Maxey does describe the inner diameter of the “inner sleeve 1 [as having] an internal diameter corresponding to or smaller than the outer

diameter of the shaft or pin B,” this description of a tight fit runs contrary to the structure implied by the use of a “core element [that] is slightly larger in cross-section than the workpiece” as recited in the present claim 21.

The three patents cited in combination against claim 21 fail collectively to show or suggest the “placing” step recited in that claim. Applicants respectfully request withdrawal of the obviousness rejection of claim 21 and the claims depending therefrom.

Still further, the asserted motivation to combine Argereu with Cohan and Maxey fails in logic. While Cohan does suggest that his method can be used to make a “rolling surface of which there is no gate vestige or mold part line,” the discs of Argereu do not have a rolling surface. Cohan focuses on rollers, not liners. Argereu focuses on discs, not rollers or liners. Maxey focuses on bushings between steel sleeves (one of which holds a rod or pin), not discs, rollers, or liners. The fact that the references are designed for very different products motivates one even less to combine those references at all, let alone in an attempt to achieve a present invention. For this additional reason, claim 21 and all claims depending therefrom should be allowed over the cited art.

In addition, claim 29 recites the additional step of “assembling a flange-forming mold portion to the tubular mold section, where the flange-forming mold portion provides a suitable mounting flange on the spindle liner for use with the turning machine.” The Office Action cites an element of the Cohan disclosure as showing this additional step, specifically identifying item 62a in Cohan’s Fig. 6. Item 62a, however, is merely the surface of a cavity that forms the outer surface of a roller. A roller is not a flange, and surface 62a certainly does not provide “a suitable mounting flange on [a] spindle liner [which, of course, Cohan does not provide at all] for use

with [a] turning machine.” For this additional reason, Applicant respectfully submits that claim 29 is non-obvious over the cited art.

The undersigned has difficulty interpreting the rejections of claims 29, 30, and 31 in the Office Action in any consistent manner. As just described, the rejection identifies Cohan’s item 62a in his Fig. 6 as either a flange that could be used for mounting or a flange-forming mold portion, depending on how one parses the sentence in the Office Action. The rejection of claim 30, however, suggests that “the flange forming portions of Cohan secure the core element in a fixed orientation,” citing Cohan’s Fig. 2, items 74 and 50; Fig. 7, items 120 and 122; and Fig. 2, item 84. If the flange-forming portion of Cohan is item 62a, it cannot “secure the core element in a fixed orientation” because it does not directly or indirectly contact the core element. In fact, nothing in Cohan forms a flange, so nothing in Cohan can possibly meet the limitations of claim 30.

As to claim 31, which recites that “the securing step comprises securing the core element in a fixed orientation within the interior of the mold by a pair of threaded pin elements disposed in opposite ends of the core element,” the Office Action cites Cohan, Fig. 2, items 54 and 82. Item 54, however, clearly does not secure anything that is at the core of a mold cavity. Because the cited references fail to show the recited limitations, Applicants respectfully suggest that a prima facie case of obviousness as to claim 31 has not been shown.

It is also not apparent why one implementing the system of Argereu would encounter any “gate vestige or mold part line.” Certainly none is shown in the Argereu disclosure. If none is present in Argereu’s discs, the asserted motivation to look to Cohan would fail.

In claim 32, the recited method includes, among other things, “selecting a core element from among a plurality of core elements, where the selected core element is slightly larger in

cross-section than the workpiece” to be manipulated on a turning machine. The Office Action argues, “Argereu teaches a method of manufacturing an article that could be used as a spindle liner for manipulating a workpiece on a turning machine having a spindle with an inner diameter (FIG. 4), wherein the core portion is substantially the same size as the workpiece, and wherein the outer diameter of the article is capable of fitting into the inner diameter of a spindle.” (Office Action, p. 5.) As one can see, the claim recites a core element that “is slightly larger in cross-section than the workpiece,” while the Office Action suggests Argereu shows a core portion that “is substantially the same size as the workpiece.” But Argereu does not even show this. To the contrary, Argereu teaches, “Each of these discs 12 is generally circular in shape as shown in FIGS. 4 and 5 with an opening 14 in its center which is hexagonal in shape to fit the hexagonal shape of the stock and is of a size so that the disc hole must be stretched slightly in order to receive the stock.” (Argereu, col. 1, lines 54-59). In this way, Argereu teaches away from the invention recited in the present claim 32. The Office Action, therefore, fails to provide a prima facie case of obviousness as to claim 32, and the rejection of that claim (and all claims depending therefrom) should be withdrawn.

Further, the cited art fails to suggest the combination asserted in the Office Action. The Office Action argues that Argereu would find it desirable “to avoid gate sections on [some unspecified] outer cylinder surface,” apparently citing “FIGS. 5 and 6,” though Argereu has no FIG. 6. In fact, if Argereu were to have slight irregularities in the outer surface of disc 12, they would be even more likely to hold a bar in place, which is part of the purpose of the Argereu device. Because the combination asserted in the Office Action is not actually suggested or motivated in the references, Applicants respectfully request that the rejection of claim 32 and its dependent claims be withdrawn.

Claim 39 recites in addition that “the workpiece is extruded stock.” In the discussion of claim 39, the Office Action asserts that “the method in which the stock is made does not materially affect the method of making the holder for that stock.” (Office Action, pp. 6-7.) While Applicants do not believe that this issue materially affects patentability, particularly in light of the allowability of parent claim 32, Applicants respectfully disagree with the Office Action’s statement as broadly put. Some embodiments of the invention, including one or more described in the present application, support the workpiece over substantially all of its length. In these cases, for example, positioning of the workpiece along the axis of the liner involves different tolerances and other dynamics in situations when the workpiece is extruded stock and when the workpiece is not. Applicants note that claim 39 is patentable over the cited art for the same reasons as its parent claim 32, so the rejection of claim 39 should be withdrawn.

The Office Action argues, “Argereu teaches that it is conventional to provide a workholder of substantially the same dimension as the stock piece in order to hold it. Argereu teaches that the hold must accommodate the stock.” (Office Action, pp. 7-8.) As discussed above, Argereu teaches that the openings in the discs for the workpiece should be smaller than the workpiece, while claims 21 (“the core element is slightly larger in cross-section than the workpiece”) and 32 (“the selected core element is slightly larger in cross-section than the workpiece”) recite limitations against which Argereu teaches (“Each of these discs 12 is generally circular in shape as shown in FIGS. 4 and 5 within opening 14 in its center which is hexagonal in shape to fit the hexagonal shape of the stock and is of a size so that the disc hole must be stretched slightly in order to receive the stock”). The general argument in paragraph 6 of the Office Action assumes that Argereu teaches something it does not, and that argument should be withdrawn.

Among other things, claim 40 recites “assembling a flange-forming mold portion to the selected tubular mold portion, where the flange-forming mold portion provides a suitable mounting flange on the spindle liner for use with the turning machine.” The Office Action suggests that “Cohan teaches a flange-forming mold portion, which would provide a flange that could be used for mounting,” citing Fig. 6, item 62a. As discussed above, Cohan’s item 62a is a sidewall of Cohan’s mold that forms a rolling surface of a roller, not a “flange on a spindle liner for use with [a] turning machine” as recited in claim 40. Because the cited references fail to show or suggest the step recited in claim 40, the rejection of claim 40, and claims 41 and 42, depending therefrom, should be withdrawn.

Applicant notes further that the Office Action discount certain of Applicants’ prior arguments as follows: “Additionally, the Applicant’s remarks appear to be drawn to distinguishing the intended uses of Svenson and the instant application, but this argument is not persuasive against the *method of making*, which requires no comprehension of which article was being held.” (Office Action, p. 8.) Applicant observes that both the first step of claim 21 and the first step of claim 32 relate significantly to a workpiece, the “article [that is] being held.” Applicant reasserts patentability of these and each other pending claim.

The present Response is believed to put the application in condition for allowance, and prompt action by the Office toward that end is respectfully requested. In the event any issue(s) remain that may be resolved by telephone, the undersigned invites the Examiner to contact the undersigned by telephone to expedite the examination of this application. Thank you.

Respectfully submitted,

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